

BIOLOGY - NATURAL HISTORY

Bachelor of Arts - Biology; Natural History Concentration

College Humanities & Sciences

Degree Specific Credits: 73

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

Note: The natural history concentration is designed for students who seek an interdisciplinary science program. This concentration is not research-oriented, and is not considered a preparatory program for traditional research-based graduate programs. It is, however, designed for students seeking careers in environmental education, science writing or illustration, natural history or wildlife film-making, or natural history centers or museums. There is enough latitude in the requirements to allow for a minor or even a double major in a related field of interest (e.g. journalism, art, media arts, etc.).

General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

Summary

Biology/Microbiology Lower Division Core	17
Upper Division Core Courses Required by Natural History Concentration	20
Additional Upper Division Major Courses Required for Natural History Concentration	4
Required Courses Outside of the Major	32
Chemistry and Geology	
Cognate Electives	
Upper Division Writing Expectation for the Major	6-7
Total Hours	79-80

Biology/Microbiology Lower Division Core

Rule: All of the following courses are required.

Note: The lower division core should be completed before attempting most upper division major courses.

AP Biology credit may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		17

Minimum Required Grade: C-

Upper Division Core Courses Required by Natural History Concentration

Rule: All of the following courses are required.

Select one of the following:		5
BIOE 370	General Ecology	
& BIOE 371	and Gen Ecology Lab (equiv to 271)	
BIOE 342	Field Ecology (taken at the Flathead Lake Biological Station)	
BIOE 406	Behavior & Evolution	3
BIOO 320	General Botany	5
BIOO 335	Rocky Mountain Flora	3
BIOO 462	Entomology	4
Total Hours		20

Minimum Required Grade: C-

Additional Upper Division Major Courses Required for Natural History Concentration

Rule: Complete one of the following courses

BIOO 470	Ornithology	4
or BIOO 475	Mammalogy	
Total Hours		4

Minimum Required Grade: C-

Required Courses Outside of the Major

Minimum Required Grade: C-

Chemistry and Geology

Rule: Complete all of the following courses

CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	3
CHMY 124	Introduction to Organic and Biochemistry Lab	2
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
Total Hours		12

Minimum Required Grade: C-

Cognate Electives

Rule: Complete 20 credits from the following disciplines (maximum of 10 credits/discipline): ANTY, ASTR, CHMY (excluding CHMY 121N, CHMY 123, CHMY 124), GPHY, GEO (excluding GEO 101N, GEO 102N), FORS, M, PHSX, STAT, or WILD

Note: Students should plan on taking M 121 or higher level M course (prerequisite for BIOB 272 and GER math requirement) and STAT 216 (pre- or co-requisite for BIOE 371).

Students interested in combining the Natural History concentration with another subject area may, with the advisor's permission, substitute 20

credits in English - writing, journalism, photography, art, foreign language, business management, or other appropriate field.

Advanced College Writing Requirement for the Major

Rule: Complete the equivalent of a full writing course (either three 1/3 writing courses or one 2/3 writing course + one 1/3 writing course or one complete writing course).

Note: To meet the Advanced College Writing Requirement, Biology students take 2 or 3 partial writing courses (either three 1/3 writing courses or one 1/3 writing course and one 2/3 writing course) or one complete writing course. The Natural History concentration requires one 2/3 writing course (BIOE 371) and several 1/3 writing courses (BIOO 320, BIOO 470 or BIOO 475). No additional writing courses must be taken to meet this requirement.

Minimum Required Grade: C-

Exception to the Modern/Classical Languages Requirement

Rule: Choose one of the following Math courses

Note: The Division of Biological Sciences has been granted an exception to the Modern/Classical Language Requirement. Either of these Calculus courses will satisfy this requirement. The Natural History concentration does not require a calculus course; the Natural History student may choose to take one year of a modern or classical language, or they may take one of these calculus courses (which will count towards a cognate elective).

M 162	Applied Calculus	4
or M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-